

WHY SAVE BHITARA KANIKA ?

- A Paradise of Nature under threat of destruction -

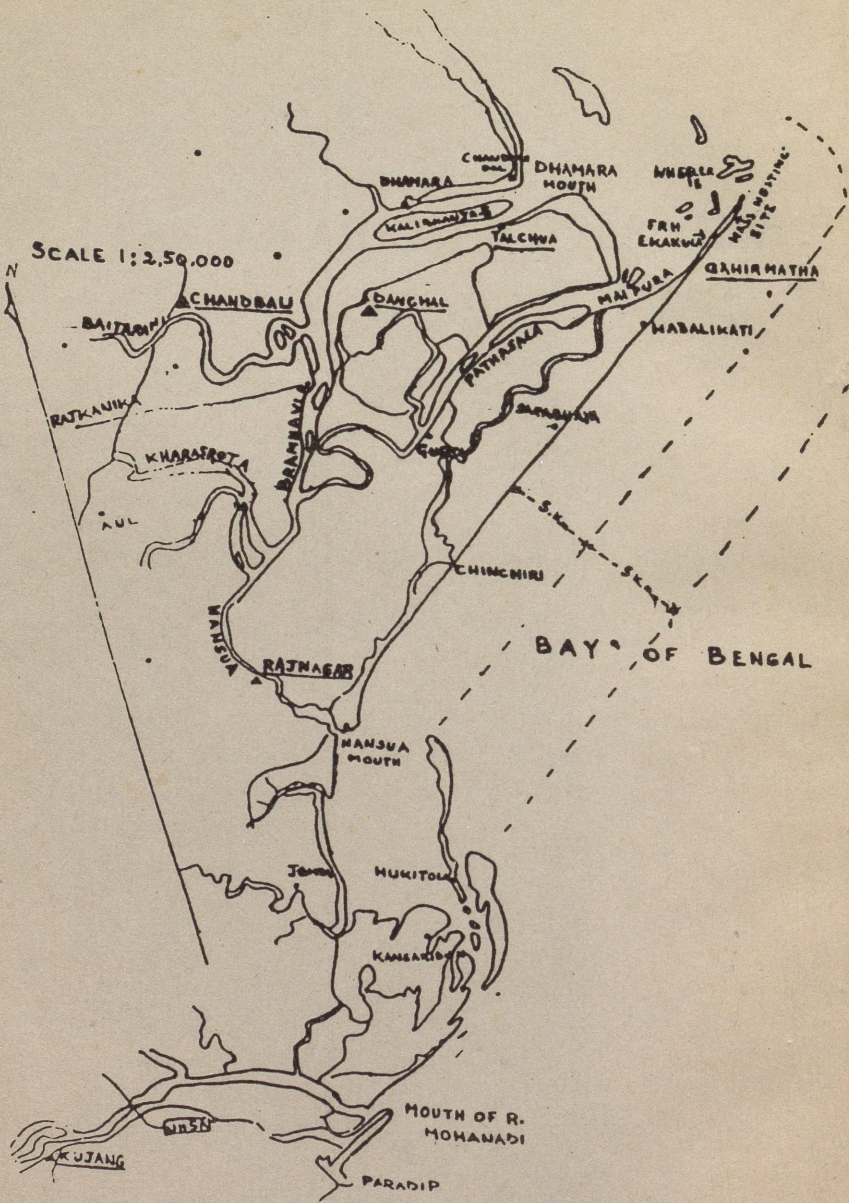
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MAP OF BHITARA KANIKA

WHY SAVE BHITARA KANIKA ?

Bhitara Kanika is a unique mangrove ecosystem which supports varieties of common and endangered wild life. Notified as a sanctuary in April, 1975, it is located on the Eastern coast of India (Bay of Bengal) in Kendrapara district, about 125 K.Ms from Bhubaneswar, the capital city of Orissa state in India.

The area of the sanctuary spreads over 650 Square Kilometers having a forest cover of 380 Square Kilometers, out of which the mangrove forest is 115.50 Square Kilometers. It is the second biggest mangrove forest in India, next only to the Sunderbans of West Bengal. This microenvironmental region at the interface of the land and sea is an outcome of the interacting fluvial and marine processes in an estuarine environment of the tropical zone. The unique environmental and ecological parameters of this micro-region in a deltaic setting with an ideal habitat for the crocodiles, diverse wild life including migratory birds and the visit of the most endangered species of Olive Ridley sea turtle in lakhs from December to April every year for laying of eggs, have drawn the attention of the entire world. The area in association with a diverse variety of mangrove plants with smooth leaves and buttress roots, has a unique significance uncommon to the earth.

It is a gift of the nature to the humanity and should be conserved at any cost to be handed over to the posterity without any impairment. If nature has any paradise, it is here in Bhitara Kanika.

MANGROVE FOREST

The Bhitara Kanika mangrove forest covering an area of 115.50 Square Kilometers in this sanctuary may be second to Sunderban in India, but rich is biodiversity. The habitat is unique as there are 62 mangrove species out of the total 67 species found in the country. On the other hand two species of mangrove (*Heritiera Kani Kensis* and *Merope Angualata*) are found here, which is confined to Bhitara Kanika only, not being reported from any other

part of India. Therefore it may be comparatively a small pocket, but is considered as true representative of the mangrove regions of the country.

Vegetation is specially adapted to survive on salty mud of the deltaic region of the coast, which is located on the confluence of two large rivers, the Brahmani and Baitarani. Stilt roots, leathery leaves and vivipary are very typical to this micro-region, which is permanently wet with salt water and high tides.

Human intervention and state's intervention have already posed a great threat to this beautiful mangrove forest. Extensive conversion of these forests to agricultural land in the past, coupled with over-exploitation and heavy grazing are the main causes for the depletion of the forest wealth. The degradation is continuing because of influx of immigrants from outside. There are about 190 villages in Bhitara Kanika comprising of about 7000 houses and 40,000 people, of these about 90 per cent are migrants from undivided Bengal. The primary occupation of about 60% of the people is paddy cultivation and the remaining 40% depend on fishing. Much of the area are illegal encroachments into the mangrove forest.

In recent years greater threat has been posed by the State Government that destroys mangrove forest on the plea of rehabilitation of people of the villages which are threatened by sea erosion. But the rehabilitation programme in most cases has not been a success as the land is unsuitable for human habitation. In many places, prawn culture has come up both legally and illegally. Without caring for conservation of this prize spot, the Revenue Department has leased out revenue land inside the sanctuary for prawn culture mostly to outsiders. Taking advantage of this, many have started clearing the forest illegally and have started prawn culture. State Government has remained a silent spectator all along.

Till 1980 when the Union Government passed the Forest (Conservation) Act, the forest was being controlled by the State Government. Time and again patches of mangrove forest were being destroyed on the plea of rehabilitation of displaced people. There is a check since 1980 because Centre's permission is required to fell

trees to use forest area for non-forest purposes. In spite of this, there is no stoppage of deforestation because of vandalism of the State.

Recently in Pataparia area inside the mangrove forest of the Bhitara Kanika sanctuary, destruction of forest is going on for resettlement purposes with the full support of the State Government. Before Forest Conservation Act of 1980 was enacted, the State Government (Forest Department) allotted one thousand acres of mangrove forest area to the Revenue Department to lease land for agriculture and habitation purposes. But taking advantage of it, another seven hundred acres of adjoining forest area have been encroached upon with the full knowledge of the administration. When Forest Department is trying to take action about these encroached lands, they are being prevented and are being pressurised to hand over those areas to the Revenue Department for allotment. Government of India should not agree to this. Rather it should be recovered from encroachment to regenerate mangrove forest there. Post facto approval by the Centre will only whet the designs of the mischief-mongers, whether they are the State or the interested parties.

In 1991, under the instruction of the people's representative of the area who is a prominent minister, the Tahasildar of Rajnagar with the help of contractors cleared an area in the Sunei-Rupeji forest block of Bhitara Kanika mangrove forest without sanction of the Central Government. In the process of burning the forest, large number of wild life were destroyed. The purpose was to rehabilitate about 400 families of Satabhaya and Kahnupur villages of Ranjagar block, who were threatened by sea erosion. About Rs.40 lakhs were spent from the State exchequer to construct the infrastructure. As the State Forest Department did not hand over the land to the Revenue Department because of lack of clearance from the Central Government, the purpose of rehabilitation has not been served. The Central Government in the Forest Ministry had sent two teams of officers to visit the area, but have not given post facto clearance because of the strong opposition of local environmentalists and Orissa Krushak Mahasangh. We demand that illegalities by the State

Government should not to legalised. Otherwise it will encourage the encroachers to destroy the mangrove forest.

The greatest threat to Bhitara Kanika mangrove forest and to such areas on the coast of Balasore, Bhadrak, Kendrapara and Jagtsinghpur districts are from prawn culture. That has been introduced recently on the coast. It has attracted outsiders who have encroached upon forest land and also revenue land illegally. With powerful support of administration and people's representatives, they have spread their nets far and wide. Recently there was an attempt to demolish their illegal prawn ponds, but after two or three days of operation, it was stopped due to interference from the top. It is high time that if we want to protect mangrove forest and utilise degraded areas for regeneration of forest to protect the area from cyclonic disaster, all the encroachments should be removed ruthlessly and a shelter belt of forest should be created. The cyclonic disaster of 1971 which took a toll of ten thousand human lives and devastated the economy of Kendrapara district, should not be allowed to be repeated.

OLIVE RIDLEY SEA TURTLES

Gahirmatha beach of Bhitara Kanika harbours the largest known rookery of Olive Ridley Sea Turtle (*Hepidochelya Olivasea*) in the world. Mexico coast which attained world fame for this sea turtle, has been relegated from its number one position due to economic activity, which scares away this endangered species. Though the number of adult female Olive Ridley sea turtle that visit this beach varies from year to year, yet it is in lakhs.

The number was about six lakhs in 1991. They come for nesting purposes (the "Arribada" the Spanish word for mass nesting) mostly during December - March and each one lays at least 100 eggs at a time. It is breath taking sights to sea thousands and thousands of these giant turtles (each weighing about 40 Kgs.) sparkling in the moon-light as they heave out of the sea and clamber on to the beach in the evening to prepare their nesting holes in the sand to lay eggs and again cover them carefully to deceive the predators.

Though Bhitara Kanika sanctuary (Gahirmatha beach) is one of the four extant nesting sites in the world where this endangered species exhibit mass nesting strategy, a phenomenon that has been described as one of the most remarkable in the natural world of animal kingdom, it has attained number one position due to the natural environment of the area.

After a heavy cyclonic storm in 1989, the Gahirmatha beach of 10 K.M. stretch was partly disintegrated and the mass nesting is now mostly taking place on an island called "Nasi" (end of a stretch) of 400 meters in the northern end of the Gahirmatha beach. This has resulted in the destruction of a large number of nests by the nesting turtle themselves due to over-crowding. This may affect the turtle population in the long run.

This global treasure is seriously threatened because of construction of a large jetty for a fishing complex at Talchua at a distance of 10 K.M. from the nesting place of Gahirmatha. This Rs. 84 lakhs fishing jetty was inaugurated with much fan fare by the Chief Minister last year and is scheduled to be completed in 1994. Once it is completed it will anchor more than 500 mechanised boats which will land about 50 tons of fish every day.

The movement of these mechanised boats will scare away these sensitive sea turtles and the ecological balance of this sanctuary including the nesting ground of sea turtles will be disturbed. It is apprehended that it may sound the death knell to this priceless spot of nature's wonderful heritage.

Another three fishing jetties at Jambu, Kharanasi and Tantiapal have been approved for construction on creeks near the sea beach in Mahakalapada Block between Paradeep and Gahirmatha, the nesting site of sea turtle. The construction is being started without taking approval of the Forest and Environment Ministry of Government of India. Even the consent of the Forest Department of State Government was not obtained. The local representative who happens to be a powerful minister of the State Government is responsible for the construction of these three jetties including the

Talchua jetty. They are done in the interest of the fishermen community who are mostly Bangladeshi immigrants.

The four jetties will definitely disturb the movement of the sea turtles to Gahirmatha beach and within a few years we will see with our own eyes, the destruction of the biggest nesting place of the sea turtles of the world. With increase of these economic activities, whatever mangrove forest is still left there, will vanish and marine environment will be polluted.

At present the biggest threat is from the trawlers using plastic gill nets which are often more than one to two K.Ms long. Turtles are caught in it and many are also fatally injured by propellers of the trawlers. In U.S.A., use of Turtle Excluder Devices (TEDs), a simple, low-tech device that allows sea turtles to escape unhurt, are mandatory for trawler fishing. That is so even for shrimp trawlers. It should be introduced in this part of the sea for all trawlers plying in the region.

Orissa Krushak Mahasangh and some of the national and international environmental organisations have repeatedly appealed to the Chief Minister of Orissa to review the fishing jetty proposal, but to no effect. We have also urged the Government to declare Gahirmatha area including the coast and at least 20 K.M. area into the sea as marine sanctuary and to prohibit fishing activity in this area.

Even now the fishing jetty project should be reviewed to drop it, if possible and make it mandatory for trawlers and motor boats to use the low cost U.S.A. system of TEDs instead of plastic gill nets. Finally it has been suggested to move the world body to designate the entire Bhitara Kanika area including the Gahirmatha beach as World Heritage site. Till then the Government of India may declare the entire area as biosphere reserve

The proposed road from Rajnagar to Talchua through one side of the sanctuary will add to the problems that beset the area. The

work has started. The heavy traffic on this road will usher in human intervention in a big way, which will ultimately threaten the mangrove forest, Olive Ridleys and the entire sanctuary with its bio-diversity.

While undertaking the above-mentioned developmental projects, no environmental impact assessment has been undertaken, nor has environmental clearance been sought from the Environmental and Forest Ministry of Govt. of India.

ESTURINE CROCODILE

Bhitara Kanika estuary is known to be the home of esturine crocodiles (*crocodilus porosus* or Baula in local language). Till a crocodile research station was established, its population was depleting due to biotic interference, particularly fishing and hunting. Bunding of creeks for irrigation and for fishing was a threat to its existence. A project called "Integrated Crocodile and Sea Turtle Conservation and Management" was initiated in 1975 with the assistance from Government of India and FAO/UNDP. Under this project, a crocodile breeding and research station was established at Dangmal. Eggs were collected from the wild and they were hatched. The young ones were reared in the research centre and are being released after three years to the nearby rivers. About 1000 hatchlings have been released and the crocodile population has increased.

The crocodile reserve also houses white crocodile (*sankhua* in local language) which is unique in the world and has the distinction of having the world's longest (7 meters) crocodile. Because of the pressure within the sanctuary, sometimes they migrate upstream outside the sanctuary.

Bunding of creeks, fishing in crocodile infested streams, and parking of boats disturb the area of the crocodiles. This often cause danger to human lives and cattle. Sometimes they become victims also when they bathe in the rivers or cross them with their cattle.

WILD LIFE

The thick manrove forest of Bhitara Kanika, the creeks and the beach provide an ideal habitat for wild life, both aquatic and terrestrial. This is the second largest estuarine reserve of India and the topography of the area serves as the favourable natural home for amphibians and reptiles. These include five species of amphibians, nine species of lizard, one species of crocodilians, eighteen species of snakes and seven species of turtles (three marine and four fresh water forms). Several of these are quite common in the area and some of these are endangered and protected.

The two important natural phenomena of crocodile and Olive Ridley sea turtle have been dealt with separately for its world-wide importance. Other important animals are spotted deer, sambar, leopard, fishing cat, porcupine, otters etc. Reptiles like python, king cobra, kraits, water monitor lizards add to the richness of the faunistic resources of the famous sanctuary.

The bird population is immense, varied and colourful. There are large number of open-billed storks, numbering about 30,000. The nesting site of these storks are called "Bagagahan". About 170 varieties of birds are found which include king fisher (six species) stork (four species), Heron (five species), Egret (four species), white ibis, white bellied sea eagles, kite (three species), common snipes, curlews, sand pipers, cormorants, darters, white breasted water hens, plovers, bee eaters (two species), lapwings (two species), myna (four species), parakee (three species), Red jungle fowl, Grey hornbills, spotbilled pelicans, sea gulls (two species), Lesser whistling teals. Many of them are migratory ones coming from North Asian region. Besides the above, there is large concentration of crabs, mud snippers, fishes and moluscas in the sanctuary.

OUR DUTY

It is our duty to protect, to preserve and to improve this world heritage. It is a challenge of the time and we shall have to meet it.



ORISSA KRUSHAK MAHASANGH

January, 1994.

INFORMATION ON MASS NESTING OF OLIVE RIDLEY SEA TURTLES OF BHITARA KANIKA

1. Location : Kendrapara district (Orissa, India), East coast, Gahirmatha Beach (Satabhaya to Babubali) of Bhitara Kanika Sanctuary, Length of beach=20 K.M Width = 100 meters.
2. Common Name : Olive Ridley or Pacific Ridley
3. Scientific Name : *Lepidochelys Olivacea*
4. Average size/weight : 75 c.m. length, 55 c.m. width, 50 K.g. average adult (Maximum 60 k.g.)
5. Life span : Probably 100 years.
6. Place of Migration : Probably Pacific Ocean
7. Food Habits : Predominantly carnivorous.
8. Period of Gestation : About two months.
9. Egg laying : (a) First nesting - January - February.
(b) Second nesting - March - April.
(In first nesting density of turtle is higher than in second nesting).
10. Environment Requirements : (1) South wind, (2) Cloudy weather with over cast sky. (3) Sea water temperature about 24^oc. (4) Free of any disturbance on the coast such as plying of Trawlers.
11. Average number of eggs per each. : 120 eggs (minimum 40, maximum 200)
12. Average size / weight of eggs. : 33 mm (maximum 37 mm); 28 grams (maximum 35 gms).
13. Colour & shape : White, soft-shelled, round like pingpong ball.
14. Period of incubation : 50 to 60 days.

15. Choice of nest site : Sandy beach above tidal level, fine sand particles.
16. Shape of Nest : Flask-shaped egg pit, about 45 cm deep.
17. Time of egg laying : Normally between sun-set and sun rise, peak hour mid-night.
18. Time taken to deposit eggs : About 45 minutes.
19. Total operation time : (Emergence from sea to return after egg laying) - 1 hour 30 minutes.
20. Hatching success : 80 per cent.
21. Hatching size and weight : 30 mm, 20 mg.
22. Period of egg-lay : Maximum 10 days for each phase, average 7 days, Maximum 3 phases in a season, peak-Nesting - 3 to 4 days.
23. Annual emergence of turtles for nesting at Ekkula. : 2.5 lakhs average, maximum 6 lakhs, minimum 0.08 lakhs.
24. Percentage of wastage of eggs. : 1) Due to predation - 50% until 1989 (since then controlled).
2) By turtles themselves - 30% due to overlapping nests, which is unavoidable.

An Appeal to all Environmentalists

OLIVE RIDLEY SEA TURTLES OF ORISSA COAST FACING EXTINCTION

Bhitara Kanika area (gahirmatha beach) on the eastern coast in Orissa has the second largest nesting population of Olive Ridley Turtles (*Lepidochelys Olivacea*) in the world, next to Mexico coast. In March 1991, about six lakhs ten thousand adult females of Olive Ridley came ashore the gahirmatha beach to nest over a period of seven days. In 1992, it declined to about 3 lakhs twenty thousand and the hatchlings numbered a staggering 350 lakhs (Ridleys usually lay one hundred or more eggs). It is a breath-taking sight to see thousands and thousands of these giant turtles (each weighing about 40 kg.) sparkling in the moon light as they heave out of the sea and clamber on to the beach.

Olive Ridley Turtle is one of the most endangered species of sea turtle in the world which is protected under a number of International Treaties. This mass nesting place of gahirmatha beach is "one of the great natural treasures", according to Belinda Wright, member of the U.N. International Union for Conservation of Nature (IUCN). Until recently the largest breeding grounds of the Ridleys were in Mexico's Pacific coastlines. Failure to adequately protect the coast, has virtually made them to disappear overnight from that region. The Bhitara Kanika sanctuary provides one of the four extant nesting sites in the world where this species exhibits mass nesting strategy, a phenomenon that has been described as one of the most remarkable in the animal kingdom.

This global treasure's existence is seriously threatened because of construction of a large jetty for a fishery complex at Talchua, at a distance of 10 Kilometers from gahirmatha, the nesting place of the Ridleys. It is on the northern side of the sanctuary. Another three Fishing Jetties are proposed to be built to the south of the Bhitara Kanika Sanctuary.

This Rs.84 lakhs fish landing jetty at Talchua which was inaugurated with much fanfare a few months ago, will be a great threat to this global heritage and also to the Bhitara Kanika sanctuary, which houses one of the finest mangrove forest with large species of flore and fauna and is also a home for a large population of salt water crocodiles, king cobras, pythons, three species of water monitors, a huge heronry, nesting white breasted sea-eagles, six-species of king fishers and numerous other animals. Besides these, Hawkbills and leatherback turtles are also found here.

Once the fishing jetty of Talchua is completed, it will anchor more than 500 mechanised boats which will land 50 tons of fish every day. The movement of these mechanised boats will scare away these sensitive turtles and the ecological balance will be seriously affected. Human settlements and human intervention have already depleted the pretty mangrove forest and the fishing jetties will sound the death knell. At present the biggest threat is the trawlers using plastic gill nets which are one to two km. long. Turtles are caught in it and many are fatally injured by propellers of the trawlers. In USA, use of Turtle Excluder Devices (TEDs), a simple, low-tech device that allows sea turtles to escape unharmed, are mandatory for trawler fishing. That is so even for shrimp trawlers. It should be introduced for all trawlers plying in the entire region on the coast.

So to preserve the natural heritage of the nation, which is a priceless possession of the globe, international environmental organisations have repeatedly appealed to the Chief Minister of Orissa to review the fishing jetty project to drop it. But the State Govt. has remained unmoved. We demand that following steps should be taken immediately to save the population of Olive Ridley Turtle from extinction and also to save the mangrove forest with its rich biodiversity. Bhitara Kanika be conserved for the nation and for the humanity.

- 1) The Gohiramatha area including the coast and at least 20 Km. area into the sea should be declared as Marine Sanctuary, and no fishing activity be permitted in that zone.

- 2) The entire Bhitara Kanika area should be declared a national park and the mangrove forest and its wild life including the crocodile snactuary should be preserved. Rather steps should be taken for recommending it for inclusion as an International Biosphere Reserve and World Heritage site under provisions set forth by the united nations.
- 3) The Talchua fishing project along with other fishing projects near the sanctuary should be dropped. The fishing trawlers should not be allowed into the proposed Gahiramatha marine sanctuary area. The trawlers and motor boats used for fishing be prohibited to use the plastic gill nets on the coast. If possible the low cost cheap devices of U.S.A. may be adopted.

We appeal to all environmentalists and naturalists to voice their protest and write to the Prime Minister of India, New Delhi - 110001 and to the Chief Minister of Orissa, Bhubaneswar - 751001, Orissa, India to accept the suggestions made above to save the Olive Ridley Turtles and their habitat. (A copy may be sent to us).

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24.9.93

